Rebecca Prince-Ruiz Searches for Real Solutions to Ocean Plastic Waste

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R. Prince-Ruiz studies ocean plastic waste for the Refill Bristol initiative in Bristol, UK. (Image: Michelle Cassar, Cassar Photography/Being PALL)

Rebecca Prince-Ruiz

"If you're like me, you address the issue of ocean plastic waste by participating in ocean beach cleanups. And you carry reusables as a way to cut down on single-use plastics. As much as these steps can help to reduce ocean plastic waste and give us all a good sense of satisfaction and accomplishment, they are just a start. I've discovered via a unique fellowship opportunity, that there are many more ways that we all need to, and can get involved in, addressing the real solutions to ocean plastic waste"

Learning About Ocean Plastic Waste First as an Educator, Then As An Advocate

I first learned about the problem of ocean plastic waste through my work educating residents for our local government in Perth, Western Australia. Visiting a Materials Recovery Facility where domestic recyclables are processed, my eyes were opened to the enormous volume of materials that need to be processed, and the complex and intense process that's needed to sort and transport all of those materials or recycling.

Unlike other materials, plastic recycling rates are low and plastic is usually downcycled rather than truly recycled. Much plastic originates on land in the form of single use disposables. Six years ago, I founded the Plastic Free July challenge to raise awareness of the problems of single-use plastic and challenged people and communities to refuse it.

Identifying the Missing Links in Solving the Issue of Ocean Plastic Waste

In 2016 I undertook a Churchill Fellowship, spending two months to research innovative programs for raising awareness, managing and finding solutions to ocean plastic pollution. I wanted to better understand the issue, look at successful initiatives, and find out what's missing. I explored beaches around Australia and sailed across the North Atlantic on a 72 foot yacht to see the problems of ocean plastic pollution first hand.

The journey took me to the USA, UK, Netherlands and Hong Kong to meet with a range of individuals and organisations, including artists and bloggers to scientists, activists, educators, designers, policy makers and waste managers, including We Hate To Waste's own Jacquie Ottman in New York!

Collaboration and Sharing of Solutions Are Key to Addressing Ocean Plastic Waste

The Fellowship provided unique insight into how to address ocean plastic pollution. There is a multitude of innovative solutions to the problem. What's missing: collaboration and sharing of these solutions to avoid duplication of effort and to amplify the impact.

The volume of plastic production, the ubiquitous nature of disposable plastic and the habits of modern consumerism mean that the problem is larger than any one organisation or stakeholder. There is no one single solution to the plastic pollution problem. It will take a range of solutions across all three categories of collection, management and reduction, involving all stakeholders.

Thus collaboration, and a connected approach which shares solutions, is required to avoid duplication of effort, to maximise impact and shift plastic material flows from the current linear system to a truly circular economy.

The 'Heading Upstream' Diagram for Addressing Ocean Plastic Waste

In order to share the breadth and depth of responses to the issue of plastic pollution, I developed the "Heading Upstream" diagram to create a framework for solutions. It contains three essential parts: Reduce, Manage, Collect.



Heading Upstream: a framework to address the ocean plastic waste problem (Image: R.Prince-Ruiz)

Government Legislation and Collaboration with Producers

As a complement to cleaning up coastal areas and using reusables, we need to head upstream to reduce disposable plastics at the source. This requires strong government legislative reform and leadership. Product stewardship and extended producer responsibility are necessary to ensure that the cost of disposable plastics doesn't remain a burden to the environment, communities and local authorities.

It also requires collaboration between regulators and corporations including producers, manufacturers, designers and retailers who are responsible for making and selling the plastics that wind up in the ocean in the first place.

Waste Management Systems That Prevent Plastic Waste Leakage

Over 80% of ocean plastic waste originates from land, so having good waste management systems are essential and dealing with the litter issue is critical.

Intentional littering is only part of the problem, for example our waste can become litter from overfull bins and lightweight plastics can easily blow away during transport and processing. Having litter control programs such as street sweeping and trash capture devices in stormwater drainage systems and waterways are important to prevent it from entering the oceans.

During my Fellowship I spent two weeks in San Francisco, a city leading the way through a range of policies and initiatives working towards zero waste to landfill and zero trash to waterways.

Exemplary Tools and Programs for Addressing Ocean Plastic Waste

My Fellowship report documents a range of tools and solutions in the three categories: Collect, Manage and Reduce. Specific details of programs such as awareness raising, activism and advocacy, and scientific research are also discussed as tools to help drive action upstream. I was impressed by the range of innovations. Highlights include:

- **Litterati** online tool to photograph litter to create a 'digital landfill', the smartphone images create litter maps with detailed information including brands and litter types valuable information which can then be used in source reduction
- Paddle & Pick cleanup weekend organized with a consortium by waterways user groups in central London raising awareness of problems upstream
- Mr. Trash Wheel floating device based on a traditional water wheel to capture trash before entering Baltimore Harbour which has collected over 1 million pounds of trash in two years also used to measure litter type, data which can then be used
- **ReThink Disposables** an initiative by the Clean Water Fund in the San Francisco Bay Area which offers free assistance to food service businesses to reduce disposable packaging and developing comprehensive case studies for businesses

- **Beat the Microbead** campaign by the Plastic Soup Foundation in the Netherlands to raise awareness of consumers of the problem of plastic microbeads and lobby business and government
 - Net-Works social enterprise transforming discarded fishing nets in developing countries into carpet tiles using circular economy principles
- Plastic Ocean Pollution Solutions Youth Summit empowering young people with information and tools to become advocates and changemakers. This three day conference in California brings together young people to work on their solutions to plastic pollution through a youth led, practical and supportive programme. A very impressive feature was a fully-catered conference of 150 people where there was no disposable plastic used!

In Conclusion: Consider the Bigger Picture Behind Ocean Plastic Waste

The focus on the problem of ocean plastic pollution needs to move beyond the beaches and reusables to the source and look at redesigning the system upstream. As individuals we cannot only make personal behavior change but can be part of the bigger picture by participating in some of these projects. After all – we are the consumers making purchasing choices and the citizens electing our governments.

We all need to work together. Consumers, Government, Producers Retailers – we all can play a role. Alone we are a drop, together an ocean!

Helpful Links to Resources for Ocean Plastic Solutions

- Churchill Fellowship Report https://www.churchilltrust.com.au/fellows/detail/4064/Rebecca+Prince-Ruiz
- Plastic Free July <u>www.plasticfreejuly.org</u> (@PlasticFreeJuly on Twitter, Instagram & Facebook)
- Article "How to have a Plastic Free July" http://www.plasticpollutioncoalition.org/pft/2016/6/6/how-to-have-a-plastic-free-july
- Earth Carers waste education course designed for adults http://www.earthcarers.org.au/programs-and-courses/earth-carers-course/

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